

**P35 - New insights into *Mycoplasma mycoides* subspecies *mycoides* Small Colony secreted exopolysaccharides**

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*Mycoplasma mycoides* subsp. *mycoides* Small Colony (MmmSC) is the causal agent of contagious bovine pleuropneumonia (CBPP), a severe contagious infection inducing lesions of pleurisy and pneumonia in cattle. This disease is responsible for major losses in African livestock and the European 90's re-emerging outbreaks demonstrated that CBPP was still a threat for developed countries. Deciphering the MmmSC genome did not reveal any bacterial virulence factor, such as toxins, and there are very few hypothesis concerning MmmSC virulence mechanisms. Nevertheless, a thick polysaccharide layer (galactan) surrounding MmmSC cells, often referred as a pseudo-capsule, was suspected to be implicated in pathogenicity. This galactan is reported to be easily shedded by MmmSC and found in the blood of infected cattle.

To study *in vitro* secreted exopolysaccharides, we have developed culture and polysaccharides extractions conditions that enhance the final yield and its purity. Monosaccharide composition of the culture supernatant extracted polysaccharide determined by HPLC chromatography revealed the same composition that the cell galactan already identified by Plackett & Buttery. Dot blot experiments showed that this compound is immuno-detected by infected cattle sera.

Furthermore, some MmmSC strains present translucent and opaque colony phenotypes due to an ON/OFF switch of the glucose phosphotransferase system permease gene. These phenotypes are potentially related to variations in capsule production.

Polysaccharides extracted from culture supernatants of these two variants showed that the translucent variant produced this secreted galactan contrarily to the opaque variant which is clearly not able to do so. MmmSC populations appear to be a mix of cells that are able or not able to secrete galactan and further work is needed to check if this mechanism is linked to virulence.

**Mots-clés :** *Mycoplasma mycoides*, bovine pleuropneumonia, secreted exopolysaccharides, virulence